DECISION
AND
FINDING OF NO SIGNIFICANT IMPACT
FOR
REDUCING AQUATIC RODENT DAMAGE THROUGH AN INTEGRATED WILDLIFE DAMAGE MANAGEMENT PROGRAM IN THE STATE OF ALABAMA

The U.S. Department of Agriculture, Animal and Plant Health Inspection Service (USDA-APHIS), Wildlife Services (WS) program responds to requests for assistance from individuals, organizations and agencies experiencing damage caused by wildlife. Ordinarily, according to APHIS procedures implementing the National Environmental Policy Act (NEPA), individual wildlife damage management actions may be categorically excluded (7 CFR 372.5(c), 60 Fed. Reg. 6000-6003, 1995). To evaluate and determine if any potentially significant impacts to the human environment from WS' planned and proposed program would occur, an environmental assessment (EA) was prepared. The EA documents the need for aquatic rodent damage management (ARDM) in Alabama and assessed potential impacts of various alternatives for responding to damage problems. The EA analyzes the potential environmental and social effects for resolving aquatic rodent damage related to the protection of resources, and health and safety on private and public lands in Alabama. WS' proposed action is to implement an Integrated Wildlife Damage Management (IWDM) program on public and private lands in Alabama. Comments from the public involvement process were reviewed for substantial issues and alternatives which were considered in developing this decision.

WS is the Federal program authorized by law to reduce damage caused by wildlife (Act of 1931, as amended (46 Stat. 1486; 7 U.S.C. 426-426c) and the Rural Development, Agriculture, and Related Agencies Appropriations Act of 1988, Public Law 100-102, Dec. 27, 1987. Stat. 1329-1331 (7 U.S.C. 426c). Wildlife damage management is the alleviation of damage or other problems caused by or related to the presence of wildlife, and is recognized as an integral part of wildlife management (The Wildlife Society 1992). WS uses an Integrated Wildlife Damage Management (IWDM) approach, commonly known as Integrated Pest Management (WS Directive 2.105) in which a combination of methods may be used or recommended to reduce damage. WS wildlife damage management is not based on punishing offending animals but as one means of reducing damage and is used as part of the WS Decision Model (Slate et al. 1992, USDA 1997, WS Directive 2.201). The imminent threat of damage or loss of resources is often deemed sufficient for wildlife damage management actions to be initiated (U.S. District Court of Utah 1993). Resource management agencies and individuals have requested WS to conduct ARDM to protect human health and safety, agricultural and natural resources, and property in Alabama. All WS wildlife damage management activities are in compliance with relevant laws, regulations, policies, orders and procedures, including the Endangered Species Act of 1973 and Clean Water Act.

Consistency

The analyses in the EA demonstrate that Alternative 4: 1) best addresses the issues identified in the EA, 2) provides safeguards for public health and safety, 3) provides WS the best opportunity to reduce damage while providing low impacts on non-target species, 4) balances the economic effects to

agricultural and natural resources, and property, and 5) allows WS to meet its obligations to government agencies or entities.

Monitoring
The Alabama WS program will annually provide to the Alabama Department of Conservation and Natural Resources (ADCNR) the WS lethal take of target and non-target animals to help insure the total statewide harvest (WS and other take) does not impact the viability of target and non-target wildlife species. In addition, the EA will be reviewed each year to ensure that it and the analysis are sufficient.

Public Involvement
The pre-decisional EA was prepared and released to the public for a 30-day comment period by a legal notice in the Montgomery Advertiser. The pre-decisional EA was also mailed directly to agencies, organizations, and individuals with probable interest in the proposed program. All comments received were in support of the proposed program. All comments were analyzed to identify substantial new issues, alternatives, or to redirect the program. All letters and responses are maintained in the administrative file located at the Alabama WS State Office, Room 118, Extension Hall, Auburn University, Alabama 36849-5656.

Major Issues
The EA describes the alternatives considered and evaluated using the identified issues. The following issues were identified as important to the scope of the analysis (40 CFR 1508.25).

- Effects beaver, nutria, and muskrat populations
- Effects on plants and other wildlife species, including T&E species
- Effects on public and pet health and safety
- Humaneness of methods to be used
- Effects on wetlands
- Economic losses to property
- Impacts to stakeholders, including aesthetics

Affected Environment
The areas of the proposed action include state and interstate highways and roads, and railroads and their right-of- ways where beaver, nutria, or muskrat activities would cause damage. The areas would also include property in or adjacent to subdivisions and business and industrial parks where beaver impound water and gnaw or fell trees. Additional affected areas include timberlands, crop lands, and pastures that experience financial losses from beaver flooding or gnawing. The proposed action could also include private and public property where beaver, nutria, or muskrat burrowing damages dikes, ditches, ponds, and levees, and where their feeding causes agricultural crop losses and negatively impacts state or Federally listed T&E species.

Objectives
- Resolve as many beaver, nutria, and muskrat damage problems that time and labor will allow.
- Respond to individual damage complaints within a two week time period.

- Prioritize work on state and county road problems before private complaints are worked.
- Maintain the take of non-target river otters below 5% of the total take during beaver, nutria, and muskrat damage management operations.

Alternatives That Were Fully Evaluated
The following five alternatives were developed to respond to the issues. Five additional alternatives were considered but not analyzed in detail. A detailed discussion of the effects of the Alternatives on the issues is described in the EA; below is a summary of the Alternatives.

Alternative 1 - No Federal WS Beaver, Nutria, and Muskrat Damage Management in Alabama
This Alternative would result in no assistance from WS in reducing beaver, nutria, or muskrat damage in Alabama. WS would not provide technical assistance or operational damage management services. All requests for beaver, nutria, or muskrat damage management assistance would be referred to the ADCNR, local animal control agencies, or private businesses or organizations. Assistance may or may not be available from any of these entities.

Alternative 2 - Technical Assistance Only
This Alternative would only allow Alabama WS to provide technical assistance to individuals or agencies requesting beaver, nutria, or muskrat damage management in Alabama. WS would not remove beaver, nutria, or muskrat or beaver dams under this Alternative. Property owners and land managers could implement their own beaver, nutria, and muskrat damage management program, use contractual services of private businesses, use volunteer services, or take no action. This Alternative would place the immediate burden of operational damage management work on the property owners and other Federal, state, or county agencies.

Alternative 3 - Non-lethal Beaver, Nutria, and Muskrat Damage Management Only
Under this Alternative, only non-lethal operational damage management and technical assistance would be provided by WS for requests for beaver, nutria, and muskrat damage management in Alabama. Request for information regarding lethal management approaches would be referred to ADCNR, local animal control agencies, or private businesses or organizations. Individuals or agencies might choose to implement WS non-lethal recommendations, implement lethal methods or other methods not recommended by WS, contract for WS non-lethal damage management services, use contractual services or private businesses, use volunteer services, or take no action. WS could remove unwanted beaver dams by hand or with binary explosives under this Alternative. In some cases, management methods employed by others could be contrary to the intended use or in excess of what is necessary.

Alternative 4 - Integrated Beaver, Nutria, and Muskrat Damage Management for all Public and Private Land (No Action/Proposed Action)
Wildlife Services proposes to administer and continue the current aquatic rodent damage management program in the state of Alabama. An IWDM approach, including technical assistance and operational damage management services, would be implemented to reduce damage associated with beaver, nutria, and muskrat activities to property, agricultural and natural resources, and public health and safety on all lands in Alabama where a need exists and request is received. An IWDM strategy encompasses the use of practical and effective methods of preventing or reducing damage while minimizing harmful

effects of damage management measures on humans, target and non-target species, and the environment. Non-lethal methods, such as physical exclusion or habitat modification, would be given first consideration in the formulation of each damage management strategy and would be recommended or implemented when practical and effective before recommending or implementing lethal methods, such as body-grip traps, snares, foothold traps, shooting, and zinc phosphide bait. However, non-lethal methods would not always be applied as a first response to each damage problem. The most appropriate response would often be a combination of non-lethal and lethal methods, or there may be instances where application of lethal methods alone would be the most appropriate strategy. Beaver, nutria, and muskrat damage management would be conducted in the state, when requested, on private or public property after an *Agreement for Control* or other comparable document has been completed and cooperator funding has been secured. All beaver, nutria, and muskrat damage management would be consistent with other uses of the area and would comply with appropriate Federal, state and local laws. Unwanted beaver dams could be breached by hand, or with binary explosives under this Alternative.

Alternative 5 - Lethal Beaver, Nutria, and Muskrat Damage Management Only

This Alternative would allow for lethal technical assistance recommendations and lethal operational beaver, nutria, and muskrat damage management by WS. Requests for information regarding non-lethal management approaches would be referred to ADCNR, local animal control agencies, or private businesses or organizations. WS would not remove beaver dams under this Alternative. Individuals or agencies might choose to implement WS lethal recommendations, implement non-lethal methods or other methods not recommended by WS, contract for WS damage management services, use contractual services of private businesses, use volunteer services, or take no action. In some cases, control methods employed by others could be contrary to the intended use or in excess of what is necessary.

Lethal methods of wildlife control are often very effective when used properly. Specific problem animals can be targeted and removed without negatively affecting the local population of a species (Bailey 1984). All control measures would be implemented in accordance with applicable Federal, state, and local laws, and WS policy.

Alternatives Considered but not Analyzed in Detail are the Following:

Eradication and Suppression

An eradication and suppression Alternative would direct all Alabama WS ARDM efforts toward planned, total elimination or suppression of these species. Eradication of beaver, nutria, and muskrat in Alabama is not supported by Alabama WS or ADCNR. This Alternative was not considered in detail because:

- Alabama WS and ADCNR opposes eradication of any native wildlife species;
- The eradication of a native species would be extremely difficult if not impossible to accomplish, and cost prohibitive; and
- Eradication of native species is not acceptable to most members of the public or those in the scientific community.

Suppression would direct Alabama WS program efforts and resources toward managed reduction of certain problem wildlife populations or groups. To consider large-scale population suppression as a goal of the Alabama WS program is not realistic, practical or allowable under present WS policy.

Population Stabilization through Fertility Control

Under this Alternative, beaver, nutria, and muskrat populations would be managed through the use of contraceptives. Beaver, nutria, or muskrats would be sterilized or contraceptives administered to limit their ability to produce offspring. However, at present, there are no chemical or biological contraceptive agents for beaver, nutria, or muskrats. A beaver, nutria, or muskrat contraceptive, chemosterilant or immuno-contraceptive, if delivered to a sufficient number of individuals, may temporarily suppress local breeding populations by inhibiting reproduction. Reduction of local populations would result from natural mortality combined with reduced fecundity. No beaver, nutria, or muskrats would be killed directly with this method; however, and treated beaver, nutria, and muskrats would continue to cause damage. Populations of dispersing beaver, nutria, and muskrats would probably be unaffected.

Contraceptive measures for mammals can be grouped into four categories: surgical sterilization, oral contraception, hormone implantation, and immuno-contraception (the use of contraceptive vaccines). These techniques would require that beaver, nutria, or muskrat receive either single, multiple, or possibly daily treatment to successfully prevent conception. The use of this method would be subject to approval by Federal and state agencies. This Alternative was not considered in detail because: (1) it would take a number of years of implementation before the beaver, nutria, or muskrat population would decline, and, therefore, damage would continue at the present unacceptable levels for a number of years; (2) surgical sterilization would have to be conducted by licensed veterinarians and would be extremely expensive; (3) it is difficult to effectively live trap or chemically capture the number of beaver, nutria, or muskrat that would need to be sterilized in order to effect an eventual decline in the population; and (4) no chemical or biological contraceptive agents for beaver, nutria, or muskrats have been approved for use by state and Federal regulatory authorities.

Compensation for Wildlife Damage Losses

The compensation Alternative would direct all Alabama WS program efforts and resources toward the verification of losses from beaver, nutria, and muskrats and to providing monetary compensation for these losses. Alabama WS activities would not include any operational damage management or technical assistance.

This option is not currently available to Alabama WS because WS is directed and authorized by law to protect American agricultural and natural resources, property, and public health and safety (Act of 1931, as amended; and the Rural Development, Agricultural and Related Agencies Appropriation Act of 1988). Analysis of this Alternative in USDA (1997) shows that compensation has many drawbacks:

- Compensation would not be practical for public health and safety problems;
- It would require larger expenditures of money to investigate and validate all losses, and to determine and administer appropriate compensation;

- Timely responses to all requests to assess and confirm losses would be difficult, and many losses could not be verified;
- Compensation would give little incentive to limit losses through other management strategies;
- Not all resources managers/owners would rely completely on a compensation program and unregulated lethal control would probably continue and escalate; and
- Neither Congress nor the State of Alabama has appropriated funds for a compensation program.

Bounties

There are no statewide bounties on beaver, nutria or muskrats in the state of Alabama.

Payment of funds for killing beaver, nutria, or muskrats (bounties) suspected of causing economic losses is not supported by WS and the Alabama WS program does not have the authority to establish a bounty program. Bounties are not considered for a viable management method because:

- Bounties are generally not effective in managing wildlife or reducing damage;
- Circumstances surrounding take of animals is largely unregulated; and
- No process exists to prohibit taking of animals from outside the damage management area for compensation purposes.

Live-capture and Relocate

Relocation of problem wildlife species is a technique that is sometimes used to alleviate wildlife damage problems. However, the success of a relocation effort depends on the potential for the problem individuals to be captured efficiently and the existence of an appropriate relocation site (Nielsen 1988). Relocation of beaver, nutria, and muskrat in Alabama is discouraged by the ADCNR (M. Seivering, ADCNR, Northport, Alabama, personal communication). Relocation may be appropriate in some situations when the species population is low, but beaver, nutria, and muskrats are abundant in much of the suitable habitat in Alabama and relocation is not necessary for the maintenance of viable populations. Because beaver, nutria, and muskrat are abundant in Alabama, those relocated into suitable habitat are very likely to encounter other beaver, nutria, and muskrat with established territories. Beaver are highly territorial and the newly introduced beaver, which are disoriented and at a disadvantage, are often viciously attacked and sometimes killed from these encounters (McNeely 1995). The survival of relocated animals is generally very poor due to the stress of relocation, so that in many cases an animal is released only to suffer mortality in a new environment (Craven 1992). Courcelles and Nault (1983) found that 50% (n=10) of radio-collared, relocated beaver died, probably from stress or predation resulting from the relocation.

Relocated beaver may also disperse long distances from the release site (Novak 1987). Hibbard (1958) in North Dakota recorded an average dispersal distance by 17 relocated beaver to be about 9 miles and Denney (1952) in Colorado reported an average dispersal of 10.4 miles and a maximum dispersal of 30 miles for 26 transplanted beaver. Beaver relocated on streams and later recaptured (n=200) moved an average distance of 4.6 miles, and in lake and pothole relocations (n=272) moved an average of 2 miles

(Knudsen and Hale 1965). Only 12% of beaver relocated on streams and 33% of beaver relocated in the lake and pothole areas remained at the release site (Knudsen and Hale 1965).

The relocation of beaver, nutria, and muskrats that are causing damage could result in damage problems at the release site or dispersal site. In this case, the original damage problem has simply been shifted from one property to another. If Alabama WS relocated the problem animal, Alabama WS could possibly be held liable for any subsequent damage caused by that animal.

Live-trapping and relocating beaver is biologically unsound and not cost-efficient (Wade and Ramsey 1986). The AVMA, the National Association of State Public Health Veterinarians, and the Council of State and Territorial Epidemiologists all oppose the relocation of mammals because of the risk of disease transmission, particularly for small mammals (CDC 1990). Among animal advocacy groups there appears to be disagreement about relocating wildlife to alleviate damage. The People for the Ethical Treatment of Animals opposes relocation of problem beaver because they believe relocation is cruel (Redmon 1999, 2000). The Humane Society of the United States believes relocation is preferable to death, in some circumstances, but point out that relocation could be stressful and result in suffering or death (Bridgeland et al. 1997).

For the above stated reasons, Alabama WS does not support the relocation of aquatic rodents and does not relocate aquatic rodents for the ARDM program within the State of Alabama.

Finding of No Significant Impact

The analysis in the EA indicates that there will not be a significant impact, individually or cumulatively, on the quality of the human environment as a result of this proposed action. I agree with this conclusion and therefore find that an EIS need not be prepared. This determination is based on the following factors:

1. Aquatic rodent damage management, as conducted by WS in Alabama, is not regional or national in scope.

2. The proposed action would pose minimal risk to public health and safety. Risks to the public from WS methods were determined to be low in a formal risk assessment (USDA 1997, Appendix P).

3. There are no unique characteristics such as park lands, prime farm lands, wetlands, wild and scenic areas, or ecologically critical areas that would be significantly affected. Built-in mitigation measures that are part of WS's standard operating procedures and adherence to laws and regulations will further ensure that WS activities do not harm the environment.

4. The effects on the quality of the human environment are not highly controversial. Although there is some opposition to wildlife damage management, this action is not highly controversial in terms of size, nature, or effect.

5. Based on the analysis documented in the EA and the accompanying administrative file, the effects of the proposed damage management program on the human environment would not be significant. The effects of the proposed activities are not highly uncertain and do not involve unique or unknown risks.

6. The proposed action would not establish a precedent for any future action with significant effects.

7. No significant cumulative effects were identified through this assessment. The number of beaver, nutria, and muskrat killed by WS, when added to the total known other take of both species, falls well within allowable harvest levels. The EA discussed cumulative effects of WS on target and non-target species populations and concluded that such impacts were not significant for this or other anticipated actions to be implemented or planned within the State.

8. The proposed activities would not affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, nor would they likely cause any loss or destruction of significant scientific, cultural, or historical resources.

9. An informal consultation with the USFWS confirmed that the proposed action would not likely adversely affect any Federally listed T&E species. The proposed project would not adversely affect Alabama State listed threatened or endangered species.

10. The proposed action would be in compliance with all federal, state, and local laws imposed for the protection of the environment.

Decision and Rationale

I have carefully reviewed the Environmental Assessment (EA) prepared for this proposal and the input from the public involvement process. I believe that the issues identified in the EA are best addressed by selecting Alternative 4 (Integrated Beaver, Nutria, and Muskrat Damage Management for all Public and Private Land (No Action/Proposed Action)) and applying the associated mitigation measures discussed in Chapter 3 of the EA. Alternative 4 is selected because (1) it offers the greatest chance at maximizing effectiveness and benefits to resource owners and managers while minimizing cumulative impacts on the quality of the human environment that might result from the program's effect on target and non-target species populations; (2) it presents the greatest chance of maximizing net benefits while minimizing adverse impacts to public health and safety; and, (3) it offers a balanced approach to the issues of humaneness and aesthetics when all facets of these issues are considered. Therefore, it is my decision to implement the proposed action as described in the EA.

Copies of the EA are available upon request from the Alabama Wildlife Services State Office, Room 118, Extension Hall, Auburn University, Alabama 36849-5656.

Rick D. Owens, Acting Regional Director
APHIS-WS Eastern Region

Date

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